

Amendments to the Claims

Claims 1-47 (Cancelled).

- 5 48. (Currently Amended) A method for creating an emitter having a flat cathode emission surface, comprising the steps of:

forming a protective layer that is conductive on the flat cathode emission surface;

then creating an electronic lens structure over the protective layer; and

- 10 then etching the protective layer to expose the flat cathode emission surface.

49. (Original) An emitter created by the process of claim 48.

- 15 50. (Original) The method of claim 48 wherein the step of applying the protective layer further comprises the step of applying a layer of titanium or molybdenum to a thickness of about 300 to about 1500 Angstroms.

- 20 51. (Currently Amended) The method of claim 48 further comprising the step of applying a cathode layer on a flat tunneling layer disposed over an electron supply to create the flat cathode emission surface, the cathode layer including gold or platinum.

Claim 52 (Cancelled)

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53. (Original) The method of claim 48 wherein the protective layer is etched with sulfuric peroxide or ammonia and water to create the exposed cathode emission surface.

- 30 54. (Original) The method of claim 53 wherein the sulfuric peroxide etch is performed using about 1 part H₂O and about 2 parts H₂SO₄.

55. (Currently Amended) A method for creating an flat tunneling emitter on an electron supply, comprising the steps of:

applying a tunneling layer on the electron supply;

then applying a flat cathode layer on the tunneling layer;

5 then applying a protective layer that is conductive on the flat cathode layer;

then applying an electron lens structure on the protective layer; and

then creating an opening in the electron lens structure and protective layer to the flat cathode ~~surface~~layer.

10 56. (Original) An emitter created by the process of claim 55.

57. (Original) The method of claim 55 wherein the applied protective layer is titanium or molybdenum having a thickness of about 300 to about 1500 Angstroms.

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Claims 58-69 (Cancelled)